# Data Form for Terrestrial Mollusk Site Surveys Locality Information

Forest:	Di	strict (Mtn F	ange):	Site 1	No:	Loca	ality:										
				Map											Sect	tion	
State:	Cou	County:			Name:			Т		Т		R	S			Description:	
		Map			U			U	TM	UTM		1		UTM			
Owner:		Elevation: FT			Datum:			Ζ	Zone:		East		North:				
Habitat Information																	
Date:	Obs	server(s)		Begin				End			·	Total Pers	tal Person		Area $(M^2)$		
					Time:				Time:		ľ	Minutes of	f Search:	earch:		Searched:	
Percentage of	Site S	Searched:	Perc	ercent		Aspec	t: ]	N N		ЛE	NW	NW S		SW	/	E	W
1-25 26-50 3	51-75	76-100	Slop	e:													
Habitat Type: Spring/Seep Str	Habitat Type: Spring/Seen Streamside Talus Deciduous Forest Conjfer Forest Mixed Forest Shruh/Steppe Grassland Other																
Primary Cano	py S	pecies:					Overall Percent Canopy Cover:							:			
												0 1-2	5 26-50	) 5	1-75	76-	100
							Canopy Species Average D						DBH	(cm):			
												0-5 5	5-15 15	-30	30	-60	>60
Photo Frame N	umbe	er(s)															
/ Description(s):																	
Weather:	Clear	Partl	y Clo	ıdy	Ove	rcast	]	Ra	in	Sno	W A	Air Temp:	°C	S	oil Te	emp:	°C
Soil Moisture:Rock Type:IgneousMetamorphicSedimentary																	
Dry Damp Wet Standing Water Snow Note Specific Type (e.g. limestone, granite):																	
Habitat																	
Threats:																	

## Mollusk Species Information

Species:	Number Alive and/or	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)							
Tissue Number (e.g., H0	001A)	Substrate Association (Circle):							
Voucher Number & Description:		under wood   under 4-20cm rock fragments   under >20cm rock fragments     on or under bryophyte mat   under leaf litter   in rock fracture   Other							
Species:	Number Alive and/or	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)							
Tissue Number (e.g., H0	001A)	Substrate Association (Circle):							
Voucher Number & Description:		under wood under 4-20cm rock fragments under >20cm rock fragments   on or under bryophyte mat under leaf litter in rock fracture Other							
Species:	Number Alive and/or	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)							
Tissue Number (e.g., LO	C001A)	Substrate Association (Circle):							
		under wood under 4-20cm rock fragments under >20cm rock fragments							
Voucher Number & Description:		on or under bryophyte mat under leaf litter in rock fracture Other							
Species:	Number Alive and/or	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)							
Tissue Number (e.g., G0	001A)	Substrate Association (Circle):							
Voucher Number & Description:		under wood under 4-20cm rock fragments under >20cm rock fragments on or under bryophyte mat under leaf litter in rock fracture Other							

## Site Map for Terrestrial Mollusk Site Surveys

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\* Draw a rough sketch of the site labeling major features such as streams, talus slopes, habitat cover types, etc. Be sure to indicate where animals were detected and label the following locations on the map:  $\mathbf{G} = \mathbf{GPS}$  reading, and  $\mathbf{P} \rightarrow \mathbf{P}$  = photo locations and directions of photos. **Other Notes:** 

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Tissue Number (e.g., H	001A)	Substrate Association (Circle):								
		under wood under 4-20cm rock fragments under >20cm rock fragments								
Voucher Number		on or under bryophyte mat under leaf litter in rock fracture Other								
Species:										
Species.	Number Alive and/or I	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)								
Tissue Number (e.g., H	.001A)	Substrate Association (Circle):								
		under wood under 4-20cm rock fragments under >20cm rock fragments								
Voucher Number		on or under bryophyte mat under leaf litter in rock fracture Other								
& Description:	<u>_</u>									
Species:	Number Alive and/or I	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)								
Tissue Number (e.g., Lo	C001A)	Substrate Association (Circle):								
		under wood under 4-20cm rock fragments under >20cm rock fragments								
Voucher Number		on or under bryophyte mat under leaf litter in rock fracture. Other								
& Description:										
Species:	Number Alive and/or I	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)								
Tissue Number (e.g., G	001A)	Substrate Association (Circle):								
		under wood under 4-20cm rock fragments under >20cm rock fragments								
Voucher Number		on or under bryophyte mate under leaf litter in rock fracture. Other								
& Description:										
Species: Number Alive and/or		Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)								
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Species:	Number Alive and/or I	Dead, Size, and Time at First Detection (e.g., 2 alive & 4 dead x 15mm Diameter or TL @ 10 minutes)								
Tissue Number (e.g., G001A)		Substrate Association (Circle):								
		under wood under 4-20cm rock fragments under >20cm rock fragments								
Voucher Number		on or under bryophyte mat under leaf litter in rock fracture. Other								
& Description:										

**Other Notes:** 

## **Mollusk Species Information Continued**

### **Site Information**

**Ecoregion:** One of the 14 ecoregion sections in Montana or 6 in the Idaho Panhandle.

Sample Block: Identify three digit number of the sampling block (range 001-999).

Site No: Identify three digit number of the site being surveyed within each sampling block (range 001-999).

**Locality:** Describe the specific geographic location of the site so that the type of site is described and the straight-line air distance from one or more permanent features on a 7.5-minute (1:24,000 scale) topographic map records the position of the site (e.g., Large talus slope 1.5 miles north of Engle Peak, N side of FS Road 225).

**State:** Use the two-letter abbreviation.

**County:** Use the full county name.

Map Name: List the name of the USGS 7.5-minute (1:24,000 scale) topographic quadrangle map.

**T:** Record the Township number and whether it is north or south.

**R:** Record the Range number and whether it is east or west.

**S:** Record the Section number

**Section Description:** Describe location of the site at the <sup>1</sup>/<sub>4</sub> of <sup>1</sup>/<sub>4</sub> section level (e.g., SENE indicates SE corner of NE corner). **Owner:** Use abbreviation of the government agency responsible for managing the land you surveyed. (e.g. USFS, BLM). If private land was surveyed list the owner's full name to indicate that you did not trespass.

**Map Elevation:** The elevation of the site as indicated by the topographic map in feet (avoid using elevations from a GPS) **Datum:** The map datum used (typically NAD 27 if off topographic map or WGS84 if off GPS unit on standard setting). **UTM Zone:** Universal Transverse Mercator zone recorded on the topographic map.

**UTM East:** Universal Transverse Mercator easting coordinate in meters as recorded on the topographic map or GPS receiver. Be sure to note any major differences between UTM coordinates on the map and those on the GPS receiver.

**UTM North:** Universal Transverse Mercator northing coordinate in meters as recorded on the topographic map or GPS receiver. Be sure to note any major differences between UTM coordinates on the map and those on the GPS receiver.

#### **Survey Information**

Date: Use MM-DD-YY format (e.g. 05/12/00 for May 12 of 2000).

**Observers:** List names or initials of individuals involved with survey of this site and circle the name of the recorder.

Begin Time: List the time the survey began in 24-hour format.

End Time: List the time the survey ended in 24-hour format.

**Total Person Minutes of Search:** Record the total person minutes the site was searched (e.g. if one person surveys for 15 minutes and another surveys for 30 minutes, but takes 5 minutes to measure a specimen the total person minutes is 40 minutes). **Area** ( $M^2$ ) **Searched:** Area in square meters that was surveyed.

Percent of Site Searched: Circle the appropriate category.

Percent Slope: Percent slope of site. Enter range if variable.

Aspect: Circle primary aspect of the site.

Habitat Type: Circle the appropriate habitat type.

**Primary Canopy Species:** List the major plant species in the canopy (e.g., red cedar, western hemlock, grand fir, ninebark) **Overall Percent Canopy Cover:** Circle the appropriate category for total canopy cover.

Canopy Species Average DBH: Circle the appropriate category.

**Photo Frame Number(s) / Descriptions:** The number of the photo as viewed on the camera's view screen and a description of the contents of the photograph (e.g.,  $#13 = 1 \times Oreohelix \ strigosa$  and  $#14-18 = 5 \times habitat$ ). Take photos of all portions of the site and anything else that may be of interest (e.g., millipedes, potential site threats).

Weather: Circle weather condition during survey.

Air Temp: Record air temperature in °C at chest height in the shade. °C = (°F – 32)/1.8

**Soil Temp:** Record soil temperature in °C at 10 cm depth. °C = (°F – 32)/1.8

Soil Moisture: Circle the appropriate category.

Rock Type: Circle the appropriate category; note specific type if known.

Habitat Threats: Note impacts from grazing, logging, mining, flooding, road building, weeds, fire, etc.

### **Species Information**

For each species, record the genus name and species, if known. If species cannot be identified in the field, place a brief description of their morphology here. Record the number alive and dead, and size range for individuals encountered, and time at first detection for the first individual encountered (e.g.,  $2 \times 15$  mm diameter (shells) or TL = 80-90mm (slugs): @ 10 minutes). Record the tissue number or range of tissue numbers for tissue samples collected (see tissue collection protocols). Record the preliminary museum voucher specimen number and description for voucher specimens collected (see voucher specimen collection protocols). Circle the substrate the animal was associated with at time of detection. Record the presence of other species detected at the site (e.g., millipedes), the time at first detection, and the voucher number and description of animals collected (see voucher and tissue collection protocols).